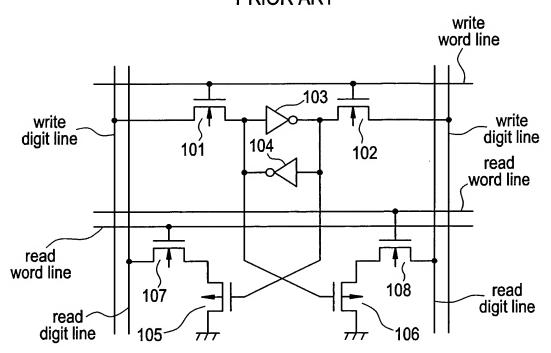
"Data Read Circuit in a Semiconductor Device Featuring Reduced Chip Area and Increased Data Transfer Rate" Q77292-----Filed January 5, 2004

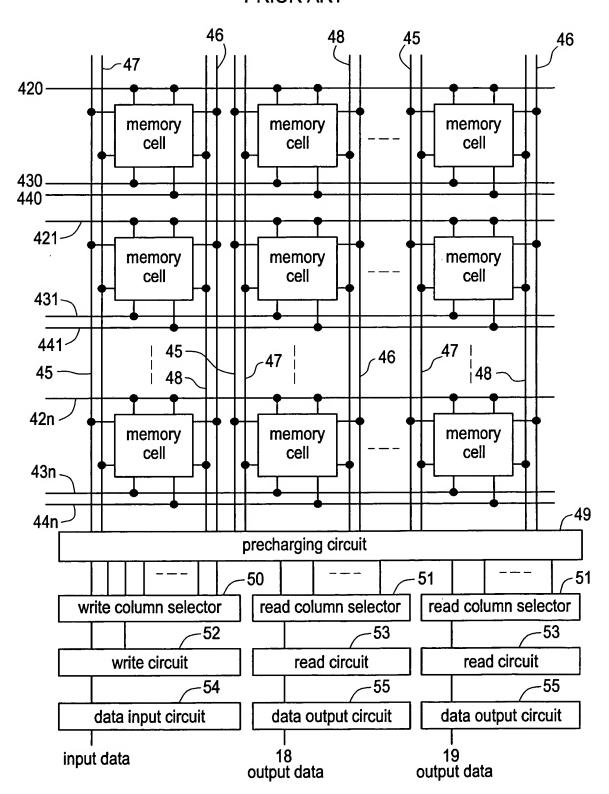


FIG. 1 PRIOR ART



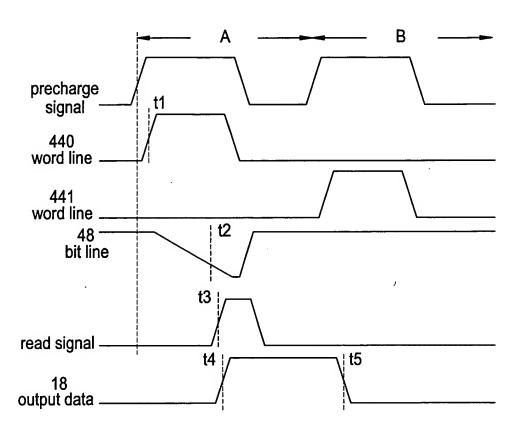
"Data Read Circuit in a Semiconductor Device Featuring Reduced Chip Area and Increased Data Transfer Rate" Q77292----Filed January 5, 2004

FIG. 2 PRIOR ART



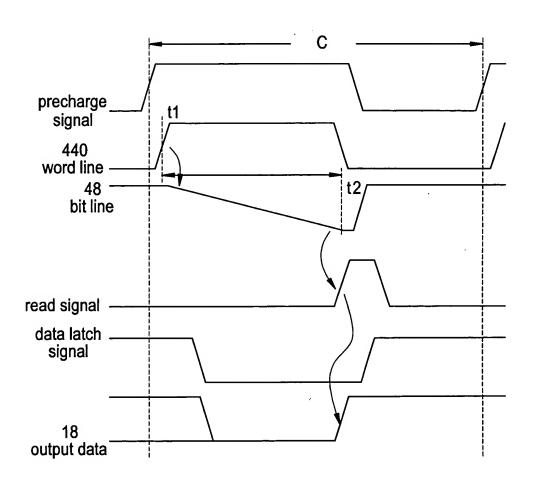
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Featuring Reduced Chip Area and Increased Data Transfer Rate"
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FIG. 3 PRIOR ART

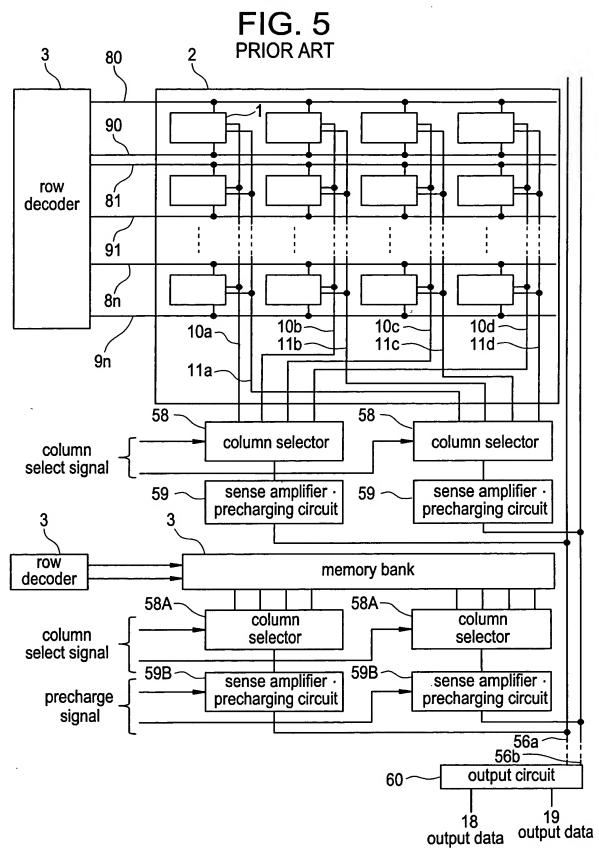


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FIG. 4



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FIG. 6 PRIOR ART

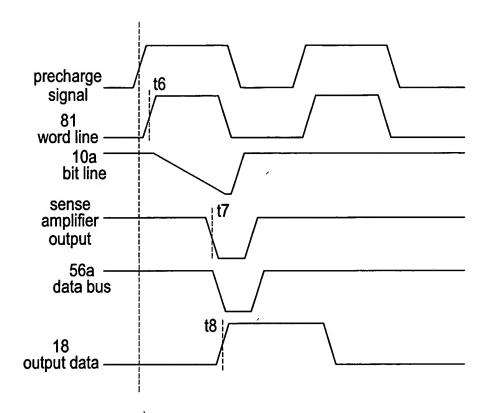
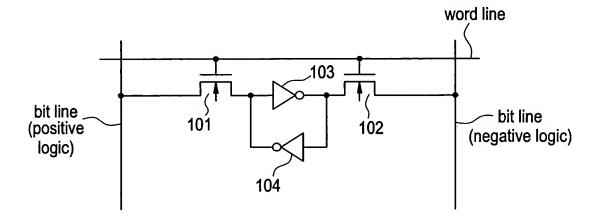


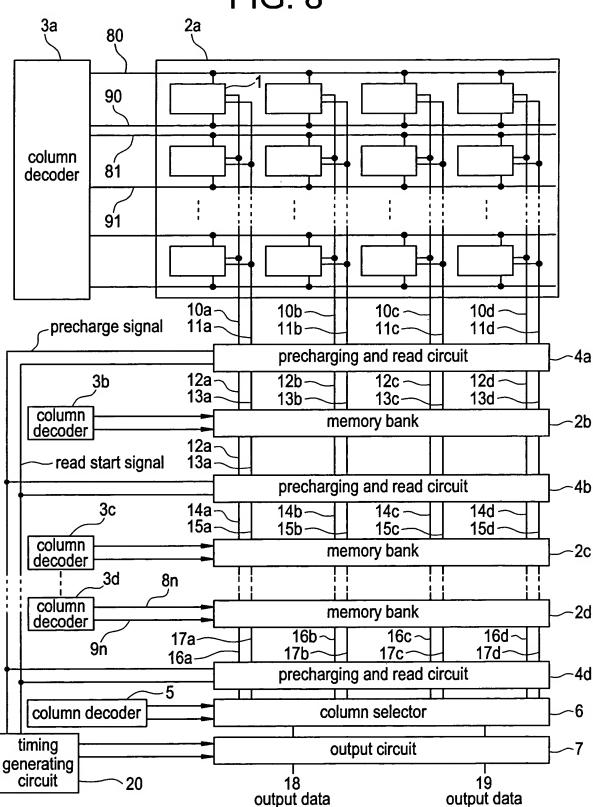
FIG. 7 PRIOR ART



· a.

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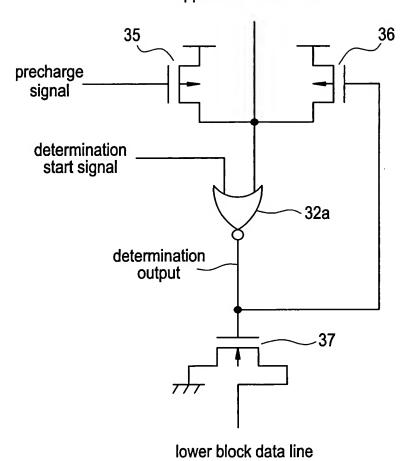


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8/15

FIG. 9

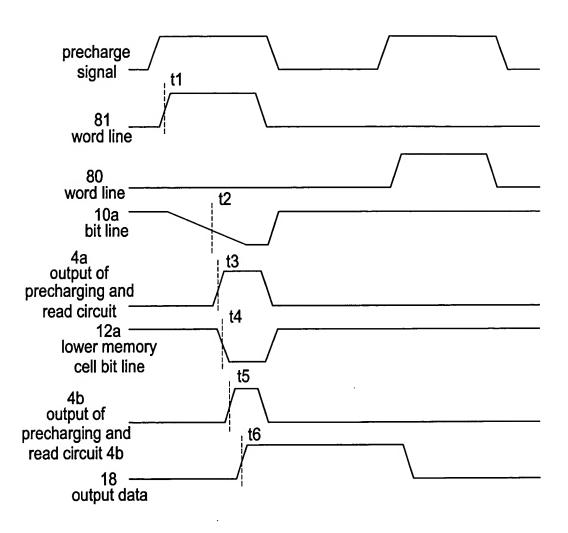
upper block data line



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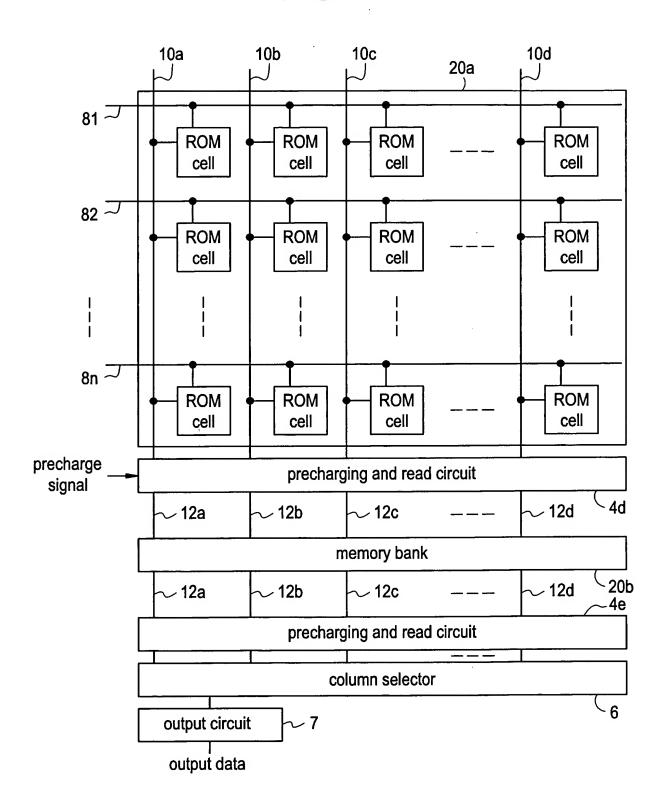
9/15

FIG. 10

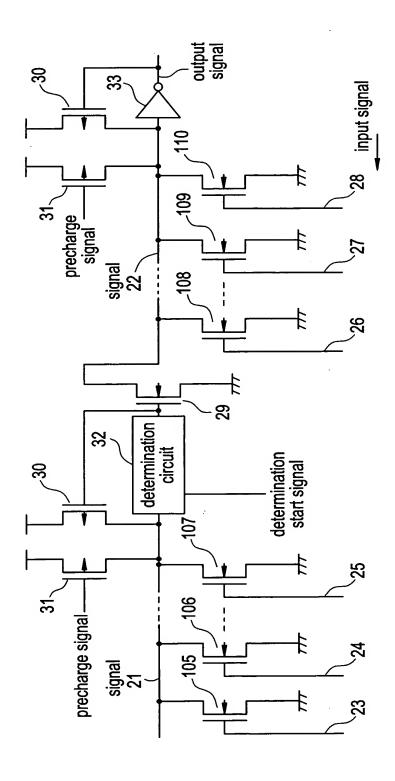


"Data Read Circuit in a Semiconductor Device Featuring Reduced Chip Area and Increased Data Transfer Rate" Q77292----Filed January 5, 2004

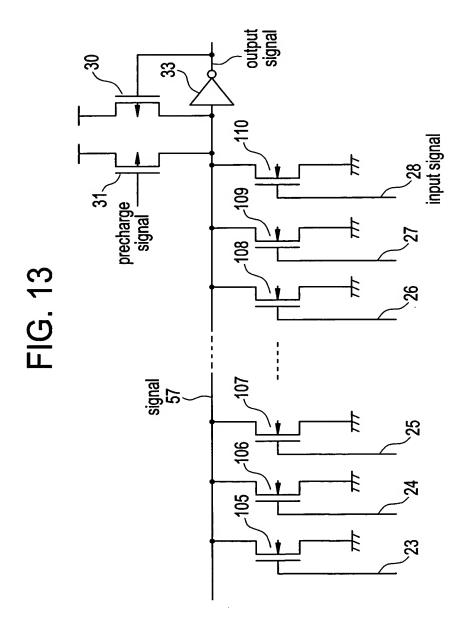
FIG. 11



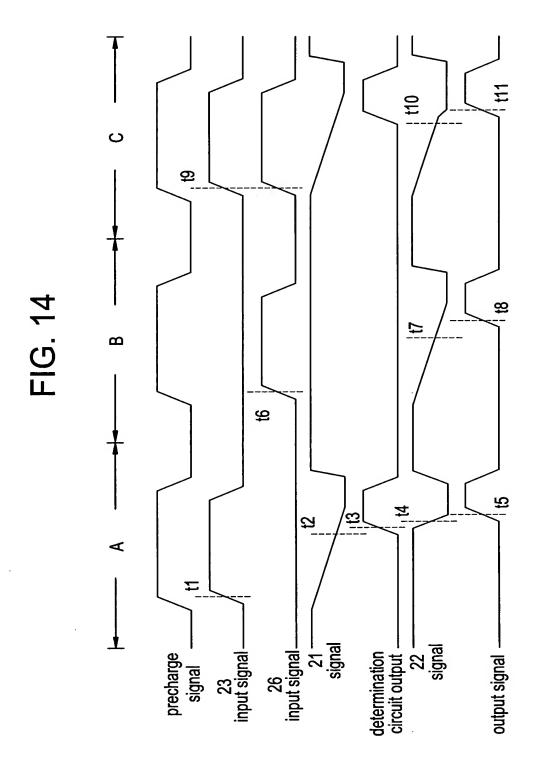
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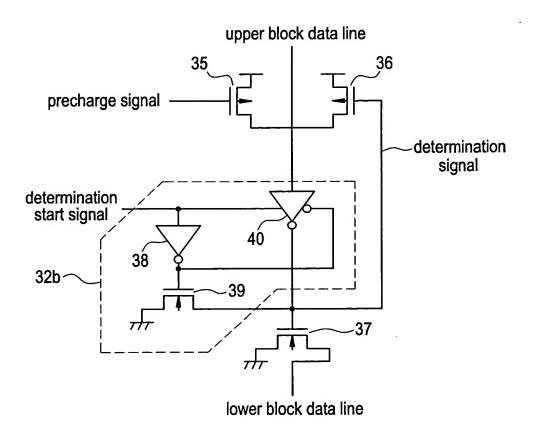


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FIG. 15



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FIG. 16

